1. A machine readable program for use in a computer to supply an exposure device with exposure data to expose an imageable element, such program performing the steps of:

(a) obtaining information representing an image comprising at least one solid image area and at least one halftone image area comprising halftone dots;

(b) superposing a first ink cell pattern on said at least one solid image area, said pattern comprising solids ink cells having a size;

(c) superposing a second ink cell pattern on said halftone dots of said at least one halftone area said second ink cell pattern comprising halftone ink cells having a size, said second pattern being a function of said halftone dots; and

(c) generating exposure information for said exposure device to reproduce said solid image areas with said superposed first ink cell pattern and said halftone image area with said superposed second ink cell pattern.

2. The machine readable program according to claim 1 wherein said halftone dots also have a size, and wherein said superposed halftone ink cell size on said halftone dots is a function of said halftone dot size.

3. The machine readable program according to claim 2 wherein there are at least two adjacent halftone areas, a first having halftone dots a number of said first area halftone dots comprising superposed ink cells according to said second pattern, and a second having halftone dots without superposed ink cells and wherein the number of said first area halftone dots comprising superposed ink cells according to said second pattern is also a function of distance from an interface between said first and said second halftone dot areas.

4. The machine readable program according to claim 1 wherein said first ink cell pattern has a first ink cell density and said second ink cell pattern has a second halftone ink cell density and wherein said second density is less than said first density.

5. A machine readable program for generating screened bit map image data for exposing an imageable element, such program performing the steps of:

(A) receiving digital values representing image data;

(B) identifying digital values representing solid image data

(C) screening said digital values representing solid image data using a first ink cell pattern to generate screened binary solid image data representing solid image data with superposed ink cells;

(D) identifying digital values representing halftone values lower than a preselected halftone value;

(E) screening said digital values representing halftone values lower than a preselected halftone value and generating screened normal halftone image data representing halftone areas under said preselected halftone value;

(F) identifying digital values representing halftone values equal to and higher than said preselected halftone value;

(G) screening said digital values representing halftone values equal to and higher than said preselected halftone value using a second ink cell pattern and generating screened ink cell carrying halftone image data representing halftone areas wherein selected halftone dots corresponding to said digital values equal to or higher than said preselected halftone value comprise ink cells on a surface thereof ; and

(H) combining said:

(i) screened solid image data,

(ii) screened normal halftone image data, and

(iii) screened ink cell carrying halftone image data

into said screened bit map image data for exposing an imageable element.

6. The machine readable program according to claim 5 wherein the step of screening said digital values representing halftone values equal to and higher than said preselected halftone value using a second ink cell pattern and generating screened ink cell carrying halftone image data representing halftone areas wherein selected halftone dots corresponding to said digital values equal to or higher than said preselected halftone value comprise ink cells on a surface thereof comprises:

(1). storing said second ink cell pattern;

(2). for each halftone digital value representing an individual halftone dot, determining if said second pattern requires an ink cell on said individual halftone dot and if it does

(3). screening said halftone dot and said ink cell and combining said screened dot and said screened ink cell to form said screened ink cell carrying halftone image data.

7. The machine readable program according to claim 6 wherein said second ink cell pattern comprises a function representing ink cell digital values as a function of halftone dot digital values and said ink cell required on said individual halftone dot has a size determined from said stored function.

8. The machine readable program according to claim 6 wherein the step of screening said halftone dot and said ink cell and combining said screened ink cell with said screened halftone dot is performed in a single step.

9. The machine readable program according to claim 6 wherein the step of screening said halftone dot and said ink cell and combining said screened ink cell with said screened halftone dot further comprises:

(a) generating a pixel tile representing a plurality of addressable pixels arrayed in a way that addressing all pixels under a selected address value generates a screened halftone and wherein said pixel address values correspond to said digital image values such that a screened halftone dot for a certain digital image value is generated by all pixels having an address value under said digital image value;

(b) determining what pixels form said screened halftone dot for said certain digital image value and determining what pixels form said screened ink cell; and

(c) screening said halftone dot with said ink cell thereon with only those pixels remaining after excluding the pixels for said screened ink cell from the pixels for said screened halftone dot.

10. A printing plate comprising at least one solid and at least one halftone printing areas, said solid printing area comprising a first plurality of ink carrying cells, and said at least one halftone area comprising halftone dots having an ink carrying cell on a surface thereof.

11. The printing plate according to claim 10 wherein said plate is a flexographic printing plate.

12. The printing plate according to claim 10 wherein said at least one solid area comprises ink carrying cells at a first density and said at least one halftone area comprises ink cells at a second density and wherein said second density is a percentage of said first density, said percentage being a function of said halftone dots in said at least one of said halftone area.

13. The printing plate according to claim 10 wherein said ink carrying cells in said halftone dots are centered in said halftone dots.

14. The printing plate according to claim 10 wherein said ink cells in said halftones have a size and wherein said size is a function of said halftones.

15. The printing plate according to claim 10 wherein halftones represent a halftone value and only halftones over a preselected halftone value comprise ink cells on a surface thereof.

16. A method for generating digital halftone dots comprising hollow centers, the method comprising:

(a) identifying a basic tile comprising a plurality of pixels each of said pixel having a digital value associated therewith said pixels arrayed within said basic tile in a first pattern.

(b) identifying a halftone dot comprising a first plurality of said pixels said first plurality comprising sequential digital pixel values including a pixel having a first maximum digital value;

(c) identifying a hollow center as a second plurality of pixels said second plurality comprising sequential digital pixel values said second plurality comprising fewer pixels that the first plurality and having a second maximum digital value, said second maximum digital value being smaller than said first maximum digital value; and

(d) forming a halftone dot comprising only pixels having digital values between said first and said second maximum values.

17. A method for generating selected halftone dots having hollow centers for use in printing a halftone image, the method comprising:

(a) selecting a first halftone dot size in which to generate said hollow center;

(b) selecting a second halftone dot size having an area substantially equal to said hollow center

(c) obtaining first digital data for a first digital dot pattern representing said first halftone dot;

(d) obtaining second digital data for said first digital dot pattern representing said second halftone dot; and

(e) subtracting said second data from said first data to generate a halftone dot having a hollow center.